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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,681	10/27/2003	Dirk George Cyriel Goethals	Q77985	2049

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EXAMINER

VO, THANH DUC

ART UNIT PAPER NUMBER

2189

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/692,681	Applicant(s) GOETHALS, DIRK GEORGE CYRIEL	
	Examiner Thanh D. Vo	Art Unit 2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/13/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Preliminary Amendment filed on October 27, 2003. Claims 4-6 have been amended. Claims 1-7 are presented for examination.

Claims 1-7 are pending.

The IDS's filed on February 13, 2004 has been considered.

Specification Objections

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).

- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Appropriate correction is required as it applies to aforementioned guidelines.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claims 1-2 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

The applicant is required to rephrase the claim language in order to clearly point out the claim invention and the structure of each and every claim limitations. The limitations are data structure, modules and depend sub-modules, and register properties.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art in view of Gupte et al. (US 5,812,416).

As per claims 1 and 2, the applicant has admitted in the prior art that the related invention claim in claims 1 and 2 are well known as disclosed in the Description of Specification on page 1 and 2. In addition, the applicant claims the steps and data-structure for storing the register properties in a data-structured according to the data-structure of the hardware device that has stated in the preamble.

The admitted prior art did not expressly disclose a data-structure of the register properties being arranged in an array for each module and dependent sub-module.

Gupte et al. disclosed a data-structure of testing the ASIC and storing the properties of the ASIC in a module and dependent sub-module pattern. See Fig. 16, and col. 16, line 25 - col. 17, line 13.

The applicant admitted prior art and Gupte et al. are analogous arts, which are from the same field of endeavor, ASIC testing method.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Gupte et al.'s algorithm to the invention claimed in

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claim 1 and 2. The motivation of combining the two methods is to reduce the storage area and faster accessing time as taught by the applicant.

As per claim 3, the applicant disclosed the data structure to store the properties of the registers comprises a number of repetition indicators to indicate the number of occurrences of a sub module of said module in claim 3 and page 3, lines 14-18. The said data structure is tree data-structure that is well known in the art as admitted by the applicant. It is further noted that the repetition indicators are embedded features or part of the tree data structure in linked-listed algorithm, which includes head and tail as indicators to indicate the beginning, next, and the end of the tree data structure.

Since the repetition indicator is an inheritance feature from the tree data-structure claimed in claim 2 therefore claim 3 is being reject under the same merit as claim 2.

As per claim 4, the applicant admitted in prior art that the device properties are value of a register, read-write bits, unstable read-write bits or read-reset bits. See page 1, line 21 – page 2, line 10.

As per claim 5, Gupte et al. disclosed a storage device to hold the data-structure. See Fig. 1, item 104, Fig. 12, item 704, and col. 13, lines 25-28.

As per claim 6, the applicant admitted prior art failed to disclose a data-structure to access the test executed by a test device.

Gupte et al. disclosed a method for data-structure to access the test executed by the test device. See col. 13, line 10 - col. 14, line 3.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the data-structure in claim 2 to combine with the method taught by Gupte et al. to arrive at the applicant's current invention as being claim in claim 6. The motivation of storing the data in such manner is to easily and quickly retrieves the properties of each hardware device.

As per claim 7, even though the applicant admitted prior art failed to disclose a data-structure to access the ASIC test include either one of Read/Write of multiple patterns to two registers, data-bus test, address-bus test, device reset test or test initial values of all registers. Gupte et al. disclosed a data-structure to access ASIC test include Read/Write of multiple patterns to two registers, data-bus test, address-bus test, device reset test or test initial value of all registers. See Fig. 5 and col. 8, line 43 - col. 9, line 7.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the data-structure in claim 2 and 6 to combine with the method taught by Gupte et al. to arrive at the applicant's current invention as being claim in claim 7. The motivation of doing so is to thoroughly tested all of the registers and buses in an hardware device ASIC against any defects.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh D. Vo whose telephone number is (571) 272-0708. The examiner can normally be reached on M-F 9AM-5:30PM.

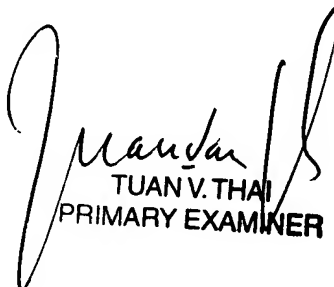
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thanh D. Vo

Patent Examiner

10/27/2005


TUAN V. THAI
PRIMARY EXAMINER